

CLAIMES

1. A sliding element for seals mainly comprising 25 to 75 weight % carbon aggregate and 20 to 50 weight % thermosetting synthetic resin binder, wherein the sliding element for seals is provided with isolatedly scattered
5 pores whose diameter is in the range of from 1 to 100 μ m.
2. The sliding element as in claim 1, wherein the pores are spherical and a mean diameter of the pores is in the range of from 2 to 100 μ m.
3. The sliding element as in claim 1, wherein a pore area ratio of the pores is in the range of from 1 to 20 %.
- 10 4. The sliding element for seals as in claim 1, wherein shore hardness is 70 or more and apparent specific gravity is 1.55 or less.
5. The sliding element for seals as in claim 4, wherein shore hardness is 130 or less.
6. A seal assembly comprising a sliding element as in claim 1 and a mating
15 sliding element comprised of a harder material than the sliding element of claim 1.
7. The seal assembly as in claim 6, wherein the mating sliding element is comprised of silicon carbide.
8. A process of manufacturing sliding element for seals, comprising the steps
20 of blending source material mainly comprised of 25 to 75 weight % carbon aggregate and 20 to 50 weight % thermosetting synthetic resin binder with 1 to 30 weight % spherical resin, and after mixing, kneading, and molding the blended material to a preform, firing the perform to a predetermined temperature.
- 25 9. The process of manufacturing sliding element for seals as in claim 8,

wherein particle size of said spherical resin is in the range of from 1 to 100 μ m.

10. The process of manufacturing sliding element for seals as in claim 8, wherein said spherical resin is comprised of one or more resins selected from polybutyl methacrylate, polymethyl methacrylate, polystyrene, polyacrylic ester, polyethylene and nylon 6, and starting point of softening, melting and volatilization of said resin is higher than a molding temperature for said molding.

11. The process of manufacturing sliding element for seals as in claim 8 wherein said thermosetting synthetic resin binder is comprised of one or more resins selected from phenol resin, epoxy resin, furan resin, polyester resin and naphthalene resin, a molding temperature for said molding is 120 to 200°C and a firing temperature for said firing is 800 to 3000 °C.